

IN THE CLAIMS:

1. (Currently Amended) A universal wire feeder designed to be connectable to a plurality of different types of power supply supplies of an a plurality of different types of arc welder welders comprising:

a power cable designed to be electrically connectable to said power supply of said arc welder;

a welding wire motor designed to feed a consumable welding wire; and,

a power conditioner at least partially integrated in said wire feeder and designed to detect a current level, a voltage level and current frequency, or combinations thereof from said power source of said arc welder used to power said welding wire motor, said power conditioner modifying designed to enable the current level, the voltage level and current frequency to pass through said power conditioner unmodified when said detected current level and voltage level are compatible to properly power said welding wire motor, said power condition designed to cause the required modification of the current level, the voltage level, or combinations thereof and current frequency to properly power said welding wire motor when said detected current level, the said voltage level, said current frequency, or combinations thereof is incompatible to power said welding wire motor.

2. (Currently Amended) The universal wire feeder as defined in claim 1, wherein said power conditioner includes an AC voltage regulator, a DC voltage regulator, a current limiter, a phase regulator, a frequency regulator, or combinations thereof.

3. (Currently Amended) The universal wire feeder as defined in claim 1, wherein said power conditioner includes a microprocessor, circuit board, or combinations thereof to detect and at least partially modify said current level, said voltage level, said current frequency, or combinations thereof.

4. (Currently Amended) The universal wire feeder as defined in claim 2, wherein said power conditioner includes a microprocessor, circuit board, or combinations thereof to detect and at least partially modify said current level, said voltage level, said current frequency, or combinations thereof.

5. (Currently Amended) The universal wire feeder as defined in claim 1, wherein said power conditioner and said welding wire motor are housed in a unit separate from a unit housing for said power supply of said arc welder.

6. (Currently Amended) The universal wire feeder as defined in claim 3, wherein said power conditioner and said welding wire motor are housed in a unit separate from a unit housing for said power supply of said arc welder.

7. (Currently Amended) The universal wire feeder as defined in claim 2, wherein said power conditioner and said welding wire motor are housed in a unit separate from a unit housing for said power supply of said arc welder.

8. (Currently Amended) The universal wire feeder as defined in claim 4, wherein said power conditioner and said welding wire motor are housed in a unit separate from a unit housing for said power supply of said arc welder.

9. (Currently Amended) The universal wire feeder as defined in claim 5 1, including a signal conditioner to receive, send, or combinations thereof, a control signal between said arc welder and said wire feeder, said signal conditioner designed to detect incompatible control signals to said

wire feeder, from said wire feeder or combinations thereof, said signal condition designed to modify incompatible control signals to said wire feeder, from said wire feeder or combinations thereof, to enable a proper control arrangement between said wire feeder and said arc welder.

10. (Currently Amended) The universal wire feeder as defined in claim 6 5, including a signal conditioner to receive, send, or combinations thereof a control signal between said arc welder and said wire feeder, said signal conditioner designed to detect incompatible control signals to said wire feeder, from said wire feeder or combinations thereof, said signal condition designed to modify incompatible control signals to said wire feeder, from said wire feeder or combinations thereof to enable a proper control arrangement between said wire feeder and said arc welder.

11. (Currently Amended) The universal wire feeder as defined in claim 7 3, including a signal conditioner to receive, send, or combinations thereof a control signal between said arc welder and said wire feeder, said signal conditioner designed to detect incompatible control signals to said wire feeder, from said wire feeder or combinations thereof, said signal condition designed to modify incompatible control signals to said wire feeder, from said wire feeder or combinations thereof to enable a proper control arrangement between said wire feeder and said arc welder.

12. (Currently Amended) The universal wire feeder as defined in claim 8 2, including a signal conditioner to receive, send, or combinations thereof a control signal between said arc welder and said wire feeder, said signal conditioner designed to detect incompatible control signals to said wire feeder, from said wire feeder or combinations thereof, said signal condition designed to modify incompatible control signals to said wire feeder, from said wire feeder or combinations thereof to enable a proper control arrangement between said wire feeder and said arc welder.

13. (Currently Amended) The universal wire feeder as defined in claim + 8, wherein power cable includes a connector that is designed to be releasably connectable to said power supply of said arc welder including a signal conditioner to receive, send, or combinations thereof a control signal between said arc welder and said wire feeder, said signal conditioner designed to detect incompatible control signals to said wire feeder, from said wire feeder or combinations thereof, said signal condition designed to modify incompatible control signals to said wire feeder, from said wire feeder or combinations thereof to enable a proper control arrangement between said wire feeder and said arc welder.

14. (Currently Amended) The universal wire feeder as defined in claim 2 1, wherein power cable includes a universal connector or interchangeable connector ~~that is~~ designed to be releasably connectable to said power supply of a plurality of different types of said arc ~~welder~~ welders.

15. (Currently Amended) The ~~welder~~ universal wire feeder as defined in claim 5 9, wherein power cable includes a universal connector or interchangeable connector ~~that is~~ designed to be releasably connectable to said power supply of a plurality of different types of said arc ~~welder~~ welders.

16. (Currently Amended) The ~~welder~~ universal wire feeder as defined in claim +0 5, wherein power cable includes a universal connector or interchangeable connector ~~that is~~ designed to be releasably connectable to said power supply of a plurality of different types of said arc ~~welder~~ welders.

17. (Currently Amended) The ~~welder~~ universal wire feeder as defined in claim ~~13~~ 3, wherein ~~said connector is detachably connected to said power cable~~ includes a universal connector or interchangeable connector designed to be releasably connectable to said power supply of a plurality of different types of said arc welders.

18. (Currently Amended) The ~~welder~~ universal wire feeder as defined in claim ~~14~~ 2, wherein ~~said connector is detachably connected to said power cable~~ includes a universal connector or interchangeable connector designed to be releasably connectable to said power supply of a plurality of different types of said arc welders.

19. (Currently Amended) The ~~welder~~ universal wire feeder as defined in claim ~~15~~ 13, wherein ~~said connector is detachably connected to said power cable~~ includes a universal connector or interchangeable connector designed to be releasably connectable to said power supply of a plurality of different types of said arc welders.

20. (Currently Amended) The ~~welder~~ universal wire feeder as defined in claim ~~16~~ 14, wherein said connector is detachably connected to said power cable.

21. (Currently Amended) The ~~welder~~ universal wire feeder as defined in claim ~~19~~ 19, ~~including a wire speed selector to select a speed of said welding wire motor~~ wherein said connector is detachably connected to said power cable.

22. (Currently Amended) The ~~welder~~ universal wire feeder as defined in claim ~~20~~ 21, including a wire speed selector to select a speed of said welding wire motor.

23. (Currently Amended) A method of connecting a universal wire feeder to an arc welder comprising:

providing a power cable designed to be electrically connectable to a power supply of said arc welder;

providing a detection arrangement at least partially in said wire feeder to detect a current level, a voltage level, ~~or combinations thereof~~ and current frequency from said power supply; ~~and;~~

enabling said detected current level, the voltage level and current frequency to power a welding wire motor of said universal wire feeder when said detected current level, voltage level and current frequency are compatible to properly power said welding wire motor; and,

providing a modifying arrangement at least partially in said wire feeder to modifying modify said detected current level, the voltage level, or combinations thereof when said detected current level, the voltage level, said current frequency or combinations thereof is incompatible to power a said welding wire motor of said universal wire feeder.

24. (Original) The method as defined in claim 23, including a power conditioner that modifies said current level, the voltage level, or combinations thereof, said power conditioner including an AC voltage regulator, a DC voltage regulator, a current limiter, a phase regulator, a frequency regulator, or combinations thereof.

25. (Currently Amended) The method as defined in claim 23, including the step of detecting a control signal traveling between said arc welder and said wire feeder, and also including the step of determining whether said detected control signal is incompatible to said wire feeder, and further including the step of modifying a detected incompatible control signal to enable a proper control arrangement between said wire feeder and said arc welder, said control signal being an

analog signal, a digital signal, an electromagnetic signal, a fiber optic signal, or combinations thereof, said control signal providing a signal for wire feed speed, arc welder identification, welding parameter information, or combinations thereof.

26. (Currently Amended) The method as defined in claim 24, including the step of detecting a control signal traveling between said arc welder and said wire feeder, and also including the step of determining whether said detected control signal is incompatible to said wire feeder, and further including the step of modifying a detected incompatible control signal to enable a proper control arrangement between said wire feeder and said arc welder, said control signal being an analog signal, a digital signal, an electromagnetic signal, a fiber-optic signal, or combinations thereof, said control signal providing a signal for wire feed speed, arc welder identification, welding parameter information, or combinations thereof.

27. (Currently Amended) The method as defined in claim 23, wherein said power cable includes a universal connector or interchangeable connector ~~that is~~ designed to be releasably connectable to said power supply of a plurality of different types of said arc welder welders.

28. (Currently Amended) The method as defined in claim 25, wherein said power cable includes a universal connector or interchangeable connector ~~that is~~ designed to be releasably connectable to said power supply of a plurality of different types of said arc welder welders.

29. (Currently Amended) The method as defined in claim 24, wherein said power cable includes a universal connector or interchangeable connector ~~that is~~ designed to be releasably connectable to said power supply of a plurality of different types of said arc welder welders.

30. (Currently Amended) The method as defined in claim 26, wherein said power cable includes a universal connector or interchangeable connector ~~that is~~ designed to be releasably connectable to said power supply of a plurality of different types of said arc ~~welder~~ welders.

31. (Original) The method as defined in claim 27, wherein said connector is detachably connected to said power cable.

32. (Original) The method as defined in claim 28, wherein said connector is detachably connected to said power cable.

33. (Original) The method as defined in claim 29, wherein said connector is detachably connected to said power cable.

34. (Original) The method as defined in claim 30, wherein said connector is detachably connected to said power cable.

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